

1899 to 1927

Aug 1894 ⁶ g.

ORIGINAL LOG BOOK OF THE "FISH HAWK"

UNITED STATES FISH COMMISSION

STATION NUMBERS

Numbers 1899 to 1927

RECORD OF DREDGING,

TEMPERATURE AND DENSITY.

Station No. 1899

Date, Sept 1^o 1894

Time of day, 12 40 PM; of tide, Ebb

Locality, Long Island Sound

Exact position, Dark Orr to Cuck, Bank L 88° 55'

Cuck Bank St & Gay Head 92° 11'

Depth, 10 fathoms

Nature of bottom, sandy with blk specks

Dredging instrument used, 7 ft beam Trawl

Direction of drift, : distance,

Temperature of air, 70 therm. No.,

" of surface water, 67 "

" at depth of fathoms, "

" at bottom, 63 1/3 "

Density at surface, 1023.6 temp., 67

" at depth of fathoms, "

" at bottom, "

Number of salinometer, 7052

Barometer reading, 30.09

State of sky, Clear

Direction of wind, WSW; force, 1

Rain,

Direction of surface current, : force,

" of bottom " : force,

Name of vessel, "Fish Hawk"

Service to which attached, U S Fish Commission

Name and rank of commanding officer, Robt P. Latt

Lieut U.S.N.

Name and position of observer, Chas Cleveland

Mate U.S.N.

NOTES RELATING TO STATION NO. 1899

Obtained about $\frac{1}{2}$ bushel of material consisting of Skate
Flounders Starfish - Crabs
Sand dollars. Hermit Crabs
Kelp & sea weed

RECORD OF DREDGING,

TEMPERATURE AND DENSITY.

Station No. 1900
 Date, Sept 1st 1894
 Time of day, 110 PM : of tide, Ebb
 Locality, Vineyard Sound
 Exact position, Nobles Lgh to Cuttyhunk
Lgh 114.26' Cuttyhunk to Gay Head 119.10'
 Depth, 16 fathoms
 Nature of bottom, Sand & Shell
 Dredging instrument used, 7 ft Beam Trawl
 Direction of drift, ; distance,
 Temperature of air, 73 therm. No.,
 " of surface water, 66 "
 " at depth of fathoms, "
 " at bottom, 66 7/8 "
 Density at surface, 1024.6 temp., 66
 " at depth of fathoms, "
 " at bottom, "
 Number of salinometer, 7052
 Barometer reading, 30.09
 State of sky, Clear
 Direction of wind, W SW : force, 1
 Rain,
 Direction of surface current, : force,
 " of bottom " : force,
 Name of vessel, Fish Hawk
 Service to which attached, U.S. Coast
 Name and rank of commanding officer, Pvt. Dietz
Dietz Wm
 Name and position of observer, Officer in Charge
Matagin

NOTES RELATING TO STATION NO. 1690

Obtained, Sea Urchins 1. Star Fish
Rock Crabs, Hermit Crabs Small
Shells, a few Spadefish & Flounders
A number of Peckers,

RECORD OF DREDGING,

TEMPERATURE AND DENSITY.

Station No. 1901.
 Date, Sept 6th 1894
 Time of day, 10,15 A.M.; of tide, Flood
 Locality, Burrows Bay Mass.
 Exact position, Head of Long Creek, S by N $\frac{1}{2}$ E.
 North end Hog Island Pt S.E. by S $\frac{1}{4}$ E.
 Depth, 5 ft 2 fms.
 Nature of bottom, Coarse sand
 Dredging instrument used, 7 ft. Neeneel.
 Direction of drift, ; distance.
 Temperature of air, 71 therm. No.,
 " of surface water, 69 ..
 " at depth of fathoms, ..
 " at bottom, 69 ..
 Density at surface, 1023.0 temp., 69
 " at depth of fathoms, ..
 " at bottom, ..
 Number of salinometer, 7052
 Barometer reading, 3004
 State of sky, Hazy
 Direction of wind, N.W.C.; force, 4
 Rain,
 Direction of surface current, : force,
 " of bottom : force.
 Name of vessel, Fish Hawk
 Service to which attached, U.S.A.T.C.
 Name and rank of commanding officer, R. Platt
 Yacht 86.2 m
 Name and position of observer,
 James W. Smith
 M.A. M.D.

NOTES RELATING TO STATION NO. 1901

Starfishes Several sponges, and
sea weeds, Branc, & Scallops

RECORD OF DREDGING,

TEMPERATURE AND DENSITY.

Station No. 1902

Date,

Sept 6th, 1894

Time of day,

10.35 A.M. : of tide.

Flood

Locality,

Burrard's Bay Mass.

Exact position,

Tangent N. E. Hogback 77° 05'

Depth, to Herring Neck Lgh. Herring Neck to Head Rock 36° 17'

5 fms

Nature of bottom,

Fine S. S. Bk Sh. B. mud

Dredging instrument used,

7 ft. beam trawl

Direction of drift,

; distance,

Temperature of air.

69.5

therm. No.,

" of surface water,

" at depth of fathoms,

" at bottom,

68

Density at surface.

1023.0

temp.,

69

" at depth of fathoms,

" at bottom,

Number of salinometer.

7052

Barometer reading.

3004

State of sky.

Hazy

Direction of wind,

E. N. E.

; force.

2

Rain,

Direction of surface current,

; force.

" of bottom "

; force.

Name of vessel.

Fish Hawk

Service to which attached,

U.S.C.

Name and rank of commanding officer.

Robert Hull

Lieut U. S. N.

Name and position of observer,

Jas A. Smith
Mate 2nd

NOTES RELATING TO STATION NO. 1902

A small quantity of Finger sponge
Tubeworm, and Sea weeds,

RECORD OF DREDGING,

TEMPERATURE AND DENSITY.

Station No. 1903.
 Date, Sept 6.
 Time of day. 11.10 A.M.: of tide, Flood.
 Locality, Burrows Bay Mass.
 Exact position, N. end Hog Is to King Rock Lgh 48.00' L
 West end of Long Duck to Hog Is 118.33. R.
 Depth, 77th 3 ft
 Nature of bottom, Barnacle Bch Shells.
 Dredging instrument used, 7ft Beam Trawl.
 Direction of drift, ; distance.
 Temperature of air, 70 therm. No.,
 " of surface water, ..
 " at depth of fathoms, ..
 " at bottom, ..
 Density at surface, 1023 temp., 68
 " at depth of fathoms, ..
 " at bottom, ..
 Number of salinometer, 7052
 Barometer reading, 3004
 State of sky, Hazy
 Direction of wind, E. N. E. ; force, 2
 Rain,
 Direction of surface current, ; force,
 " of bottom " ; force.
 Name of vessel, Fish Hawk
 Service to which attached, U. S. F. C.
 Name and rank of commanding officer, R. Platt
 Lieut U. S. N.
 Name and position of observer,
 Jas A. Smith
 Matl U. S. N.

NOTES RELATING TO STATION NO. 1903

3 Spider Crabs 1 Sgella, small Shells
Broken Shells and Sea weed,

RECORD OF DREDGING.

TEMPERATURE AND DENSITY.

Station No. 1904.

Date, Sept. 12, 1883.

Time of day, 9.40 a.m.; of tide, High water.

Locality, Keweenaw Bay, Michigan.

Exact position, Ned. Bay light between mouth of Keweenaw River;

Longitude, 87° 45' west; latitude, 46° 58' N.

Depth, 4 fms.

Nature of bottom, Firm sand.

Dredging instrument used, Tid. dredge.

Direction of drift, ; distance,

Temperature of air, 65 therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, 69 71.4 34.5333.

Density at surface, 1.0244 temp., 69

" at depth of fathoms, "

" at bottom, "

Number of salinometer, 16.10

Barometer reading, 30.04

State of sky, Partly cloudy.

Direction of wind, S.E.; force, 2

Rain,

Direction of surface current, ; force,

" of bottom " ; force,

Name of vessel, Tid. dredge.

Service to which attached, U.S.A.T.C.

Name and rank of commanding officer, W. H. Abbott

Tid. dredge.

Name and position of observer,

W. H. Abbott.

NOTES RELATING TO STATION NO. 1

RECORD OF DREDGING,
TEMPERATURE AND DENSITY.

Station No. 1905

Date, Sept 7, 1893

Time of day, 10:30 A.M.; of tide, $\frac{1}{2}$ full moon

Locality, Passaic River, N.J.

Exact position, Lat. $41^{\circ} 46' 46''$ Long. $74^{\circ} 46' 46''$

Neptune's Fife to Dredge, 102.32

Depth, $67 \frac{1}{2}$ fms.

Nature of bottom, Sand, gravel, shell

Dredging instrument used, Neptune's Fife

Direction of drift, ; distance,

Temperature of air, 68, therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, 68 " 50.30

Density at surface, 102.35 temp., 68.0

" at depth of fathoms, "

" at bottom, "

Number of salinometer, 12.57

Barometer reading, 30.0

State of sky, Partly cloudy

Direction of wind, S.W. ; force, 2

Rain, 26.

Direction of surface current, ; force,

" of bottom " ; force,

Name of vessel, "

Service to which attached,

Name and rank of commanding officer, J. C. L. -

J. C. L. -

Name and position of observer,

J. C. L. -
John C. L. -

NOTES RELATING TO STATION NO. 1

RECORD OF DREDGING,
TEMPERATURE AND DENSITY.

Station No. 1966.

Date, July 17, 1882,

Time of day, 11:45 A.M.; of tide, Half flood

Locality, Off coast of New Jersey

Exact position, Off coast of New Jersey, 5 fms.

Distance from shore, 10 miles; depth, 12 fms.

Depth, 22 fms.

Nature of bottom, Fine sand

Dredging instrument used, Gill net

Direction of drift, W.; distance, 10 miles

Temperature of air, 75 therm. No.,

" of surface water, " "

" at depth of fathoms, " "

" at bottom, 16 fms. temp., 65° C.

Density at surface, 1.0246 temp., 65° C.

" at depth of fathoms, " "

" at bottom, " "

Number of salinometer, 1

Barometer reading, " "

State of sky, " "

Direction of wind, W.; force, " "

Rain,

Direction of surface current, " ; force,

" of bottom " ; force,

Name of vessel, Finisterre

Service to which attached, H. L. S.

Name and rank of commanding officer, C. W.

Name and position of observer,

NOTES RELATING TO STATION NO. 1306.

1. Description of station: Located on a flat, open prairie, about one-half mile from the south bank of the Arkansas River. The ground is covered with short grass and scattered shrubs. The station is situated near the center of a large, irregularly shaped depression, which appears to be a former lake bed. The surrounding terrain consists of rolling hills and low mountains, with the Arkansas River flowing to the west.

2. Elevation: Approximately 4,500 feet above sea level.

3. Climate: The climate is semi-arid, with hot summers and cool winters. Precipitation is relatively low, averaging about 15 inches per year.

4. Water supply: The station is located near a stream, which flows through the depression. The water is clear and cold, with a temperature of approximately 55 degrees Fahrenheit.

5. Soil: The soil is a light-colored, sandy loam, with a high organic content. It is well-drained and suitable for agriculture.

6. Vegetation: The vegetation consists primarily of short grasses and shrubs, including mesquite, acacia, and yucca. There are also some small trees, such as mesquite and acacia, scattered throughout the area.

7. Fauna: The fauna includes various species of birds, mammals, and insects. Some of the more common species include the black-tailed jackrabbit, coyote, bobcat, and various songbirds.

8. History: The area has been inhabited by humans for thousands of years. There are several ancient rock art sites in the vicinity, including petroglyphs and pictographs. The first recorded visit to the area was made by a Spanish explorer in the early 1700s.

9. Geology: The area is characterized by a complex geological history, with evidence of ancient marine life, volcanic activity, and tectonic plate movement. The station is located on a fault line, which has caused significant ground movement over time.

10. Other: The station is located near a major transportation route, the Arkansas River, which provides access to the area. The station is also located near a number of archaeological sites, including a prehistoric village and a Native American burial ground.

RECORD OF DREDGING,
TEMPERATURE AND DENSITY.

Station No. 1967

Date, Feb 2 1892

Time of day, 12.05 P.M.; of tide, High water

Locality, 60 miles S.E. of

Exact position, Between 30° 45' N. Lat. and 31° 15' N. Lat.

110° 30' W. Long. and 111° 30' W. Long.

Depth, 10 fms.

Nature of bottom, rocky bottom

Dredging instrument used,

Direction of drift, ; distance,

Temperature of air, 72 therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, 1.02414 temp., 65,

" at depth of fathoms, "

" at bottom, "

Number of salinometer, 5205

Barometer reading, 30.07

State of sky, Partly cloudy

Direction of wind, N. E. : force,

Rain,

Direction of surface current, : force,

" of bottom " : force,

Name of vessel, Gulliver

Service to which attached, U.S. Fish Commission

Name and rank of commanding officer, R. C. Green

Seaman and Pilot Officer

Name and position of observer,

Gulliver,
1 male 6 ft.

NOTES RELATING TO STATION NO. 1705

South from Shreveport, Louisiana.
On road between Shreveport and
DeRidder, La.

RECORD OF DREDGING,

TEMPERATURE AND DENSITY.

Station No. 1901

Date, Sept. 11 1866

Time of day, 9 A.M. ; of tide, $\frac{1}{4}$ quarter ebb

Locality, Menemsha Bay Mass

Exact position, $\frac{3}{4}$ mile N E of Lobster
view

Depth, 6 fms.

Nature of bottom, rocky bottom

Dredging instrument used, Fairholme dredge

Direction of drift, ; distance, —

Temperature of air, 72 therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, 102470 temp., 64

" at depth of fathoms, "

" at bottom, "

Number of salinometer, 7052

Barometer reading, 30.02

State of sky, cloudy

Direction of wind, N. E. ; force, /

Rain,

Direction of surface current, ; force,

" of bottom " ; force,

Name of vessel, U.S.A.T. "Harrington"

Service to which attached, U.S. Fish Commission

Name and rank of commanding officer, W. D. B. Aldred

Ensign U.S.N.

Name and position of observer, C. H. Cleveland

Mate U.S.N.

NOTES RELATING TO STATION NO. 1908

Crabs - Starfish - Lobsters
Skates - Flounders - Sea Robbins
Hermit Crabs, Dead shells

RECORD OF DREDGING.

TEMPERATURE AND DENSITY.

Station No. 1909

Date, Sept 16th 1894Time of day, 10 15 AM : of tide, 1st quarter, Ebb

Locality, Minemeka Bright

Exact position, 1/6 mile SSW from Gap

Wear. 2 hr

Depth, 3 fathoms

Nature of bottom, white sandy bottom

Dredging instrument used, 7 ft Beam Trawl

Direction of drift, ; distance,

Temperature of air, 72 therm. No.,

" of surface water,

" at depth of fathoms,

" at bottom,

Density at surface, 1.024.8 temp., 65

" at depth of fathoms,

" at bottom,

Number of salinometer, 70.52

Barometer reading, 30.47

State of sky, cloudy

Direction of wind, SSW : force, 1

Rain,

Direction of surface current, ; force,

" of bottom " ; force,

Name of vessel, Fish Hawk

Service to which attached, U.S.A.C.

Name and rank of commanding officer, W. L. Godard

Ensign 2d class

Name and position of observer, C. H. Cleveland
Mate 2d class

NOTES RELATING TO STATION NO. 1909

Huan-dors - Skates - Crabs - Kelp
Sea Robbins - Star fish - Hermit
Crabs - young sea bass
Stone crabs

RECORD OF DREDGING.

TEMPERATURE AND DENSITY.

Station No. 1910

Date, Sept 14th 1894

Time of day, 10:55 A.M.; of tide, 1st half Ebb

Locality, Vineyard Sound

Exact position, Fish Hawk Flattery; Lat 42° 10'

Bottom, sand & gravel; Eng 9° 50'

Depth, 13 1/2 fathoms

Nature of bottom, Gr. Sand & Gravel

Dredging instrument used, 7 ft Beam Trawl

Direction of drift, SSW; distance, 1/4 mile

Temperature of air, 73 therm. No.,

" of surface water,

" at depth of fathoms,

" at bottom,

Density at surface, 1.024.8 temp., 65

" at depth of fathoms,

" at bottom,

Number of salinometer, 7052

Barometer reading, 30.44

State of sky, Cloudy

Direction of wind, SSW; force, 1

Rain.

Direction of surface current, : force,

" of bottom " : force,

Name of vessel, Fish Hawk

Service to which attached, U.S.A.C.

Name and rank of commanding officer, T.L. Board

Ensign G.W.

Name and position of observer, C.H. [unclear]

Math. Off.

NOTES RELATING TO STATION NO. 1916

Obtained about a dozen of
Material consisting of dead
Shells - Plates - Corals - Sand dollars
Star fish - young sea Robins
Hermit Crabs - Sea urchines

RECORD OF DREDGING,

TEMPERATURE AND DENSITY.

Station No. 1911

Date, Sept 14th 1894

Time of day, 12 Noon : of tide, 3/4 Ebb

Locality, Vineyard Fauna 113° 30'

Exact position, Hobbs Bank, 10 miles off

Autograph Bank, Gay Head St 121° 13'

Depth, 14 fathoms

Nature of bottom, Sand gravel & shells

Dredging instrument used, 7/8 Beam Trawl

Direction of drift, : distance.

Temperature of air, 76 therm. No.,

" of surface water, 64 1/2 "

" at depth of fathoms, "

" at bottom, "

Density at surface, 1024.8 temp., 64 1/2

" at depth of fathoms, "

" at bottom, "

Number of salinometer, 7052

Barometer reading, 30.40

State of sky, Cloudy

Direction of wind, SSW ; force, 2

Rain,

Direction of surface current, : force,

" of bottom " : force,

Name of vessel, Fish Hawk

Service to which attached, R.C.S.P.C.

Name and rank of commanding officer, W.L. Brad

Engin. 2d S.W.D.

Name and position of observer, H.H. Cleveland

Math. 2d S.W.D.

NOTES RELATING TO STATION NO. 11

Thunders - Crabs. Hermit Crabs
Kelp - Sand dollars
Sea Urchins

**RECORD OF DREDGING,
TEMPERATURE AND DENSITY.**

Station No. 1912

Date, Sept 19th 1894

Time of day, 2:45 P.M.; of tide, 3/4 Ebb.

Locality, Buzzards Bay

Exact position, Head of Long Neck Bay 36° 36' N.
Wings Neck 34° 45' E. Lat. 36° 36' N.

Depth, 3 fathoms + off

Nature of bottom, Gr. s. & s.

Dredging instrument used, 7 ft B Hawk

Direction of drift, : distance,

Temperature of air, 65° therm. No.,

" of surface water, 69 1/2

" at depth of fathoms, ..

" at bottom, ..

Density at surface, 1022.6 temp., 69 1/2

" at depth of fathoms, ..

" at bottom, ..

Number of salinometer, 70.52

Barometer reading, 29.94

State of sky, Cloudy

Direction of wind, E N E ; force, 2

Rain,

Direction of surface current, : force,

" of bottom " : force,

Name of vessel, "Fish Hawk"

Service to which attached, U.S.A.C.

Name and rank of commanding officer, W.L. Brown

Ensign W.L. Brown

Name and position of observer, G.W. Kinselwell

Mate W.L. Brown

NOTES RELATING TO STATION NO. 1912

a few pieces yellow sponge
dead conch shells - young sea urchins
~~dead Escallop Shells~~

RECORD OF DREDGING
TEMPERATURE AND DENSITY.

Station No. 191

Date, Sept 19th 1890

Time of day. 3.05 PM : of tide, 3/4 ft.

Locality, *Keweenaw Co.*

Exact position: Bird's Eye to Wing Neck Ls. 124° 26'

Wings Neck Sp to Tangent N end of Mashmire $58^{\circ} 48'$

Depth, 4 fathoms + 2 ft

Nature of bottom. *shrub*

Dredging instrument used, *Tiffaine Shovel*

Direction of drift, : distance

Temperature of air, **66** therm. No.

" of surface water.

" at depth of fathoms.

at bottom.

Density at surface. 1022.6 temp., 69½

" at depth of fathoms.

"at bottom."

Number of salinometer. 7052

Barometer reading, 29.92

State of sky.

Direction of wind, **EN^E**; force, **2**

Rain.

Direction of surface current. : force

"of bottom" " : force

Name of vessel. "Bird Hawk"

Service to which attached. *b/f & C*

Name and rank of commanding officer, Mr. Lead

Encyclopædia

NOTES RELATING TO STATION NO. 1913

Absent a bucket of yellow lump
sponges a few live Escallop shells
dead oysters & Escallop shells

RECORD OF DREDGING.

TEMPERATURE AND DENSITY.

Station No. 1914

Date, Sept 19 1894

Time of day, 3.30 PM; of tide, 3/4 Ebb

Locality, Buzzards Bay

Exact position, Bird Island, N. Long Neck 42° 38'

Wings Neck at Tiverton, N. of Providence 40° 27'

Depth, 4 fathoms & 3 ft

Nature of bottom, Sand, s

Dredging instrument used, 7 ft Run Hawk

Direction of drift, ; distance,

Temperature of air, 66 therm. No.,

" of surface water, 69 1/2 "

" at depth of fathoms, "

" at bottom, "

Density at surface, 1022.6 temp., 69 1/2

" at depth of fathoms, "

" at bottom, "

Number of salinometer, 7052

Barometer reading, 2992

State of sky, cloudy

Direction of wind, S N E ; force, 3

Rain,

Direction of surface current, ; force,

" of bottom " ; force,

Name of vessel, Fish Hawk

Service to which attached, U.S.F.C.

Name and rank of commanding officer, W. L. Grade

Ensign 1st class

Name and position of observer, B. H. Cleveland

Math. M. S.

NOTES RELATING TO STATION NO. 1914

about the base of other small
sponge, Dead Escallop Shells,
a few live Escallop and
Spider Oyster

RECORD OF DREDGING.

TEMPERATURE AND DENSITY.

Station No. 1915

Date, Sept. 26th 1894

Time of day, 2.10 PM; of tide, High

Locality, Menominee River

Exact position,

Depth, 7 fathoms

Nature of bottom, Sandy bottom

Dredging instrument used, 1/4 hour Trawl

Direction of drift, ; distance,

Temperature of air, 55 therm. No.,

" of surface water, 64

" at depth of fathoms, "

" at bottom, "

Density at surface, 1024.0 temp., 64

" at depth of fathoms, "

" at bottom, "

Number of salinometer, 70.5

Barometer reading, 30.42

State of sky, Partly cloudy

Direction of wind, East; force, 5

Rain,

Direction of surface current, ; force,

" of bottom " ; force,

Name of vessel, Fish Hawk

Service to which attached, U.S.A.C.

Name and rank of commanding officer, M.L. Ornd

Oncor. Lieut.

Name and position of observer, G.W. Ladd

Navy Dept.

NOTES RELATING TO STATION NO. 10, 5

I obtained a 1/2 bushel of material consisting of Lobster
Crabs - Star fish - Kelp & yellow
lump sponge. Dead Clam Shells
Shore rock

RECORD OF DREDGING.

TEMPERATURE AND DENSITY.

Station No. 1916

Date, Sept 28th 1894Time of day, 2:30 PM; of tide, $\frac{1}{4}$ HighLocality, *Alenonwha Banks*

Exact position,

Depth, 10 fathoms

Nature of bottom, 5 ft m

Dredging instrument used, 7 ft Ram Dredge

Direction of drift, : distance,

Temperature of air, 65

therm. No.,

" of surface water, 64

" at depth of fathoms,

" at bottom,

Density at surface, 1024.2

temp., 64

" at depth of fathoms,

" at bottom,

Number of salinometer, 70.52

Barometer reading, 30.42

State of sky, Partly cloudy

Direction of wind, East ; force, 5

Rain,

Direction of surface current. : force,

" of bottom " : force,

Name of vessel, Fish Hawk

Service to which attached, U.S.A.

Name and rank of commanding officer, Prof. T. B. M.

Ensign W. G.

Name and position of observer, C. H. L. S. and
M. A. S. S.

NOTES RELATING TO STATION NO. 1916

Obtained much information
from Mr. G. C. Johnson,
of the Ontario Game Conserva-
tion Commission, who has
seen many species of birds
in the area. He has seen
Young sea Robin. Puffing
bird (Spoon-billed sandpiper)

RECORD OF DREDGING,

TEMPERATURE AND DENSITY.

Station No. 1917

Date, Oct 2^o 1894Time of day, 7.15 AM : of tide, $\frac{3}{4}$ flood

Locality, Chesapeake Bay

Exact position, Buttons Bluff & Plantation flats & the so Choptank River & Cape Charles City depth 22 fathoms

Depth, 22 fathoms

Nature of bottom, S+Pebbles

Dredging instrument used, 7 ft 13 fathoms

Direction of drift, ; distance,

Temperature of air, 60 therm. No..

" of surface water, 68 ..

" at depth of fathoms, ..

" at bottom, ..

Density at surface, 1017.4 temp., 68

" at depth of fathoms, ..

" at bottom, ..

Number of salinometer, 7052

Barometer reading, 3030

State of sky, Clear

Direction of wind, N E ; force, 2

Rain,

Direction of surface current, ; force,

" of bottom " ; force,

Name of vessel, Fish Hawk

Service to which attached, U. S. F. C.

Name and rank of commanding officer, M. L. Brooks

Captain M. L. Brooks

Name and position of observer, G. H. Clements
Master's Mates

NOTES RELATING TO STATION NO. 191

Obtained about 2 bushels of
Gorgonias & sea grass
Numerous Hug shooles. Starfish
Octopus. Crabs. Squilla.

RECORD OF DREDGING.

TEMPERATURE AND DENSITY.

Station No. 1918

Date, Oct 12 1894

Time of day, 7.45 A.M. of tide, $\frac{3}{4}$ flood

Locality, Chesaapeake Bay

Exact position, Baiter Bluff at Plantation flats
Lat. 38° 00' Chesaapeake Bay
Cape Charles 30° 00' - Depth 20 fathoms

Nature of bottom, Bar m

Dredging instrument used, 7 ft. Bear Paw

Direction of drift, ; distance,

Temperature of air, 60 therm. No.,

" of surface water, 68 "

" at depth of fathoms, "

" at bottom, "

Density at surface, 1016.6 temp. 68

" at depth of fathoms, "

" at bottom, "

Number of salinometer, 7052

Barometer reading, 30.30

State of sky, Clear

Direction of wind, N E ; force, V

Rain,

Direction of surface current, ; force,

" of bottom " ; force,

Name of vessel, Fish Hawk

Service to which attached, 26 S F C

Name and rank of commanding officer, M L Brad

Ensign 1870

Name and position of observer, C W Cleveland

Matt 1870

NOTES RELATING TO STATION NO. 1918

Obtained about a bushel of material consisting of Crabs, Starfish, Gasteropods, Hydroids (numerous), Gorgonians yellow, strong sponge and grass. Caught off Sea Pigeon.

RECORD OF DREDGING,
TEMPERATURE AND DENSITY.

Station No. 1919

Date, Oct 12th 1894

Time of day, 6:45 A.M. : of tide, Low ; Wind

Locality, Chesapeake Bay

Exact position, Bull's Bluff & Plantation flats

Lt Hs 20, Chesapeake Harbor port

at Cape Charles City 00

Depth, 26 fathoms

Nature of bottom, Rocky

Dredging instrument used, 7 ft. + 10 fathoms

Direction of drift, : distance,

Temperature of air 67 therm. No.,

" of surface water, 65

" at depth of fathoms,

" at bottom,

Density at surface, 1016-3 temp., 65°

" at depth of fathoms,

" at bottom,

Number of salinometer, 70.5

Barometer reading, 30.03

State of sky, Clear

Direction of wind, S E : force, 3

Rain,

Direction of surface current, : force,

" of bottom " : force,

Name of vessel, Pittsfield

Service to which attached, U. S. N. C.

Name and rank of commanding officer, W. L. Goddard

Ensign 1st class

Name and position of observer, G. W. Cleveland

Major 1st class

NOTES RELATING TO STATION NO. 1420

Obtained about 1/2 basket of material
consisting of Corals, Crabs, Shrimps,
Gorgonias, Algae & a King Ostracion
Starfish. Coral. 1 Sea Pigeon

RECORD OF DREDGING,
TEMPERATURE AND DENSITY.

Station No. 1920

Date, Oct 12th 1894

Time of day, 9.10 a.m. : of tide, High water

Locality, Chesapeake Bay

Exact position, Butter's Bluff & Plantation flats off

H. S. - Chincoteague St. & Hooper Strait at Cape

Ches. City 50 fms. 21 fathoms

Nature of bottom, Blk M

Dredging instrument used, 7ft B Trawl

Direction of drift, : distance,

Temperature of air, 68 therm. No.,

" of surface water, 66

" at depth of fathoms, ..

" at bottom, ..

Density at surface, 1016.4 temp., 66

" at depth of fathoms, ..

" at bottom, ..

Number of salinometer, 7052

Barometer reading, 30.30

State of sky, Clear.

Direction of wind, W E : force, 3

Rain,

Direction of surface current, : force,

" of bottom " : force,

Name of vessel, Fish Hawk

Service to which attached, U.S.F.C.

Name and rank of commanding officer, W.L. Bishop

Ensign U.S.N.

Name and position of observer, C.H. Cramond
Mate U.S.N.

NOTES RELATING TO STATION NO. 1920

Obtained about a bucket of material consisting of Starfish, Crinoids, star fish - *Chrysonidea*, Dead shells with coral attached, *Alcyonium*, yellow sponge & fragments.

RECORD OF DREDGING,
TEMPERATURE AND DENSITY.

Station No. 1921c

Date, April 23rd 1895

Time of day, 9.56 A.M. Local time

Locality, Chesapeake Bay

Exact position, 2 1/2 miles S.E. of Ocean

Wicomico Sh. W.

Depth, 18 fathoms

Nature of bottom,

Dredging instrument used, Glass float attached to the dredge
 Direction of drift, W.N.W. : distance,

Temperature of air, 59 therm. No.,

" of surface water, 58

" at depth of fathoms,

" at bottom,

Density at surface, 10007 temp., 53

" at depth of fathoms,

" at bottom,

Number of salinometer, 70.47

Barometer reading, 29.94

State of sky, Clear flaggy over the bay

Direction of wind, S : force, 1

Rain,

Direction of surface current, : force,

" of bottom : force,

Name of vessel, "Fish Hawk"

Service to which attached, U.S.A.C.

Name and rank of commanding officer, Robt. P. Bell

Lieut. R. P. Bell

Name and position of observer, G. H. Moore

Moth. R. C. M.

NOTES RELATING TO STATION NO. 192

At 10:20 AM in the Fawn

The specimens obtained.

The trawl was lowered about 12
to 15 feet and down the surface
they catch fish about 75
inches long in sets.

**RECORD OF DREDGING,
TEMPERATURE AND DENSITY.**

Station No. 1922

Date, April 28th 1895

Time of day, 10.35 A.M. : of tide, Flood

Locality, Sheepshead Bay

Exact position, 2 1/2 miles SSE of station

Freemason Rocks

Depth, 18 fathoms

Nature of bottom,

Dredging instrument used, Trawl net
Trawl also attached to the beams

Direction of drift, : distance,

Temperature of air, 62 therm. No.,

" of surface water, 53

" at depth of fathoms, "

" at bottom, "

Density at surface, 10007 temp., 53

" at depth of fathoms, "

" at bottom, "

Number of salinometer, 7047

Barometer reading, 29.92

State of sky, Clear, flag over the bay

Direction of wind, S : force, 1

Rain,

Direction of surface current, : force,

" of bottom " : force,

Name of vessel, U.S. Fish Commission

Service to which attached, U.S. Government

Name and rank of commanding officer, Prof. Plate

Lieut. J. G. F.

Name and position of observer, G. H. Stearns and C. L. Stebbins

NOTES RELATING TO STATION NO. 1923

Line fished from 100 fms. to the bottom
At 100 fms., and here in the bottom
including the bottom, was found a
dead sponge, *Cyathis*, *Hippocampus*,
Squilla, *Crangon*, *Palaemon*, & other
shrimps.

RECORD OF DREDGING.

TEMPERATURE AND DENSITY.

Station No. 1924

Date, Sept. 28, 1895

Time of day, 12.30 PM; of tide, 5' low

Locality, Between Key West

Exact position, 2 1/2 miles S 62° E off Great White Shoal Bank

Depth, 11 fathoms

Nature of bottom, L s

Dredging instrument used, 1/2 ft. dredge, State at a hor. & the bottom

Direction of drift, NNE; distance,

Temperature of air, 61 therm. No.,

" of surface water, 53 "

" at depth of fathoms, "

" at bottom, "

Density at surface, 1000.4 temp., 53

" at depth of fathoms, "

" at bottom, "

Number of salinometer, 70.4

Barometer reading, 29.92

State of sky, Clear and sunny with a few clouds

Direction of wind, NNE; force, 20

Rain,

Direction of surface current, " : force,

" of bottom " : force,

Name of vessel, Fish Hawk

Service to which attached, U. S. Fish Commission

Name and rank of commanding officer, W. C. Wood

Name and position of observer, G. H. Greenlaw

Chief Officer

NOTES RELATING TO STATION NO. 1

22 July 1911
Sawdust bank down at 26' 55
containing a little dead grass and a
few Shimp - suspended sand, fine
sand, pebbles in the first 100 mm.
In the 100 mm. below

RECORD OF DREDGING.

TEMPERATURE AND DENSITY.

Station No. 1925

Date, Sept 14th 1895

Time of day. 9.25 A.M.; of tide,

Locality, off Pensacola

Exact position, Pensacola bar off. buoy 11.5 dist
Dredge down 2.5 at bottom 9.8 ^{24 miles}
at 10th st surface 10.2Depth. 26 fathoms 14.27 fathoms ^{15.27 fathoms}

Nature of bottom, Gr. Sph. spks

Dredging instrument used, 7 fath. Beam Trawl

Direction of drift, ; distance,

Temperature of air, 74 therm. No.,

" of surface water, 86 "

" at depth of fathoms, "

" at bottom, 78 "

Density at surface. 1.022 temp., 76

" at depth of 1.022 fathoms, " 80

" at bottom, 1.026.0 " 78

Number of salinometer, 7352 " 77

Barometer reading, 29.84

State of sky, Clear

Direction of wind, South : force, 1

Rain,

Direction of surface current, : force,

" of bottom " : force,

Name of vessel, "Fish Hawk"

Service to which attached, U.S. Fish Commission

Name and rank of commanding officer, F. M. Swift

Major Refd

Name and position of observer, G. C. Chapman

Mata Refd

NOTES RELATING TO STATION NO.

Planned about a bucket of material consisting of 2 small
blocks of Coral, 2 Red Scallop
shells - Red Limpet sponge
a few small Shrimps - 2 young mackerel
1 Pipe fish, 1 Sea Robin, 1 Gurnard,
1 young Squid, Hard clam
1 Murex terebra, 2 quill fish, 1 tile fish
1 large starfish - 1 small starfish
1 Fish - 1 Sand dollar 1 small scorpion
and 4 small crabs.

The bottom of the specimen
was about 7 inches long
& the top edge about 2 inches
in diameter.

RECORD OF DREDGING.

TEMPERATURE AND DENSITY.

Station No. 1926

Date, Sept 14 1885

Time of day, 10, 25 AM of tide,

Locality, off Pensacola

Exact position, Pensacola Harbor N & W west
 dredged down 10.25 at bottom 10.85 24 miles
 water at 11.10 surface 11.25

Depth, 29 fathoms

Nature of bottom, Gr. & blk spts.

Dredging instrument used, 7 foot beam trawl

Direction of drift, ; distance,

Temperature of air, 91 therm. No.,

" of surface water, 85

" at depth of fathoms,

" at bottom, 77

Density at surface, 1022.4 temp., 85

" at depth of fathoms,

" at bottom, 1026.0 " 77

Number of salinometer, 70.52

Barometer reading, 29.84

State of sky, Clear

Direction of wind, South : force,

Rain,

Direction of surface current, : force,

" of bottom " : force,

Name of vessel, Fish Hawk

Service to which attached, U.S. Commission

Name and rank of commanding officer, G. Swift

Lieut. R. T.

Name and position of observer, G. K. Ladd

A. M. 25th

NOTES RELATING TO STATION NO. 1926

Caught a small octopus, very
but no material left.
not very strong, caught at 977 fms. just
after 5 p.m. circumstances etc.
Red coral, small, 1 piece
1 bucket of sponge (cont'd a bit of the old
Scallop shells) 1 small squid
1 small flatfish 1 sea urchin
1 sand dollar
The tentacles of the octopus were
about 10 inches long and the
tentacles about 10 inches

RECORD OF DREDGING,
TEMPERATURE AND DENSITY.

Station No. 1927

Date, Sept. 14 1895

Time of day, 11,50 A.M. : of tide,

Locality, Off Pensacola

Exact position, Pensacola Bar Ho being NW 1/4 4 miles
dredge down 11,50 at bottom 12 fathoms
" " 1.05 " surface 1.15

Depth, 23 fathoms

Nature of bottom, 5 rock spks

Dredging instrument used, 7ft Beam Trawl

Direction of drift, ; distance,

Temperature of air, 73 therm. No.,

" of surface water, 86

" at depth of fathoms,

" at bottom, 78

Density at surface, 1022.2 temp., 86

" at depth of fathoms,

" at bottom, 1026.0 " 78

Number of salinometer, 70.52

Barometer reading, 29.84

State of sky, clear

Direction of wind, South; force, 1

Rain,

Direction of surface current, : force,

" of bottom " : force,

Name of vessel, "Fisk Hawk"

Service to which attached, U.S.A. Commission

Name and rank of commanding officer, F. F. M.

Secy. 41 S. N.

Name and position of observer, S. H. Gleason

Mate Sec'y. 41 S. N.

NOTES RELATING TO STATION NO. 1927

Obtained about one bushel
of material consisting of
3 Octopus about 6 inches in
length with tentacles about
12 inches long.

From sand bottom. Found many
1/2 dozen of dead Crabs and
Shells, also some small fish
which were not identified.

2 Sea Eels and a few
Shrimps.

RECORD OF DREDGING,
TEMPERATURE AND DENSITY.

Station No.

Date,

Time of day, : of tide,

Locality,

Exact position,

Depth,

Nature of bottom,

Dredging instrument used,

Direction of drift, : distance,

Temperature of air, therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, temp.,

" at depth of fathoms, "

" at bottom, "

Number of salinometer,

Barometer reading,

State of sky,

Direction of wind, : force,

Rain,

Direction of surface current, : force,

" of bottom " : force,

Name of vessel,

Service to which attached,

Name and rank of commanding officer,

Name and position of observer,

NOTES RELATING TO STATION NO.

RECORD OF DREDGING,
TEMPERATURE AND DENSITY.

Station No.

Date,

Time of day, : of tide,

Locality,

Exact position,

Depth,

Nature of bottom,

Dredging instrument used,

Direction of drift, : distance,

Temperature of air, therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, temp.,

" at depth of fathoms, "

" at bottom, "

Number of salinometer,

Barometer reading,

State of sky,

Direction of wind, ; force,

Rain,

Direction of surface current, : force,

" of bottom " : force,

Name of vessel,

Service to which attached,

Name and rank of commanding officer,

Name and position of observer,

NOTES RELATING TO STATION NO.

RECORD OF DREDGING,
TEMPERATURE AND DENSITY.

Station No.

Date.

Time of day. : of tide,

Locality,

Exact position,

Depth,

Nature of bottom,

Dredging instrument used,

Direction of drift. : distance,

Temperature of air. therm. No.,

" of surface water. "

" at depth of fathoms. "

" at bottom. "

Density at surface. temp.,

" at depth of fathoms. "

" at bottom. "

Number of salinometer,

Barometer reading,

State of sky,

Direction of wind. : force,

Rain,

Direction of surface current. : force,

" of bottom " : force,

Name of vessel,

Service to which attached,

Name and rank of commanding officer,

Name and position of observer,

NOTES RELATING TO STATION NO.

RECORD OF DREDGING,
TEMPERATURE AND DENSITY.

Station No.,

Date,

Time of day, : of tide,

Locality,

Exact position,

Depth,

Nature of bottom,

Dredging instrument used,

Direction of drift, : distance,

Temperature of air, therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, temp.,

" at depth of fathoms, "

" at bottom, "

Number of salinometer,

Barometer reading,

State of sky,

Direction of wind, : force,

Rain,

Direction of surface current, : force,

" of bottom " : force,

Name of vessel,

Service to which attached,

Name and rank of commanding officer,

Name and position of observer,

NOTES RELATING TO STATION NO.

RECORD OF DREDGING,
TEMPERATURE AND DENSITY.

Station No.:

Date:

Time of day. : of tide,

Locality,

Exact position,

Depth,

Nature of bottom,

Dredging instrument used,

Direction of drift, ; distance,

Temperature of air. therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface. temp.,

" at depth of fathoms, "

" at bottom, "

Number of salinometer,

Barometer reading,

State of sky,

Direction of wind, ; force,

Rain,

Direction of surface current, ; force,

" of bottom " ; force,

Name of vessel,

Service to which attached,

Name and rank of commanding officer,

Name and position of observer,

NOTES RELATING TO STATION NO.

RECORD OF DREDGING,
TEMPERATURE AND DENSITY.

Station No.

Date,

Time of day. : of tide,

Locality,

Exact position,

Depth,

Nature of bottom,

Dredging instrument used,

Direction of drift. : distance,

Temperature of air. therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface. temp.,

" at depth of fathoms, "

" at bottom, "

Number of salinometer,

Barometer reading.

State of sky,

Direction of wind. ; force,

Rain,

Direction of surface current. : force,

" of bottom " : force,

Name of vessel,

Service to which attached,

Name and rank of commanding officer,

Name and position of observer,

NOTES RELATING TO STATION NO.

RECORD OF DREDGING,
TEMPERATURE AND DENSITY.

Station No.

Date,

Time of day. : of tide,

Locality,

Exact position,

Depth,

Nature of bottom,

Dredging instrument used,

Direction of drift, : distance,

Temperature of air, therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, temp.,

" at depth of fathoms, "

" at bottom, "

Number of salinometer,

Barometer reading,

State of sky,

Direction of wind, ; force,

Rain,

Direction of surface current, : force,

" of bottom " : force,

Name of vessel,

Service to which attached,

Name and rank of commanding officer,

Name and position of observer,

NOTES RELATING TO STATION NO.

RECORD OF DREDGING,
TEMPERATURE AND DENSITY.

Station No.

Date,

Time of day. : of tide.

Locality,

Exact position,

Depth,

Nature of bottom,

Dredging instrument used,

Direction of drift. : distance,

Temperature of air. therm. No.,

" of surface water. ..

" at depth of fathoms. ..

" at bottom. ..

Density at surface. temp.,

" at depth of fathoms. ..

" at bottom. ..

Number of salinometer,

Barometer reading.

State of sky,

Direction of wind. ; force,

Rain,

Direction of surface current. : force,

" of bottom " : force,

Name of vessel,

Service to which attached,

Name and rank of commanding officer,

Name and position of observer,

NOTES RELATING TO STATION NO.

RECORD OF DREDGING,
TEMPERATURE AND DENSITY.

Station No.

Date,

Time of day. : of tide,

Locality,

Exact position,

Depth,

Nature of bottom,

Dredging instrument used,

Direction of drift, : distance,

Temperature of air. therm. No.,

" of surface water, ..

" at depth of fathoms, ..

" at bottom, ..

Density at surface. temp.,

" at depth of fathoms, ..

" at bottom, ..

Number of salinometer.

Barometer reading.

State of sky,

Direction of wind, ; force,

Rain,

Direction of surface current, : force,

" of bottom : force,

Name of vessel.

Service to which attached.

Name and rank of commanding officer,

Name and position of observer,

NOTES RELATING TO STATION NO.

RECORD OF DREDGING,
TEMPERATURE AND DENSITY.

Station No.

Date.

Time of day. : of tide,

Locality,

Exact position,

Depth,

Nature of bottom,

Dredging instrument used,

Direction of drift, : distance,

Temperature of air. therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface. temp.,

" at depth of fathoms, "

" at bottom, "

Number of salinometer.

Barometer reading.

State of sky,

Direction of wind, : force,

Rain,

Direction of surface current, : force,

" of bottom " : force,

Name of vessel.

Service to which attached.

Name and rank of commanding officer,

Name and position of observer,

NOTES RELATING TO STATION NO.

RECORD OF DREDGING,
TEMPERATURE AND DENSITY.

Station No.

Date,

Time of day. : of tide,

Locality,

Exact position,

Depth,

Nature of bottom,

Dredging instrument used,

Direction of drift. : distance,

Temperature of air. therm. No.,

" of surface water. "

" at depth of fathoms, "

" at bottom, "

Density at surface. temp.,

" at depth of fathoms. "

" at bottom. "

Number of salinometer.

Barometer reading.

State of sky,

Direction of wind. : force,

Rain,

Direction of surface current. : force,

" of bottom " : force,

Name of vessel,

Service to which attached,

Name and rank of commanding officer,

Name and position of observer,

NOTES RELATING TO STATION NO.

RECORD OF DREDGING,
TEMPERATURE AND DENSITY.

Station No.

Date,

Time of day. : of tide,

Locality,

Exact position,

Depth,

Nature of bottom,

Dredging instrument used,

Direction of drift. : distance,

Temperature of air. therm. No.,

" of surface water, ..

" at depth of fathoms, ..

" at bottom, ..

Density at surface. temp.,

" at depth of fathoms, ..

" at bottom, ..

Number of salinometer.

Barometer reading.

State of sky,

Direction of wind. : force,

Rain,

Direction of surface current. : force,

" of bottom " : force,

Name of vessel,

Service to which attached.

Name and rank of commanding officer,

Name and position of observer,

NOTES RELATING TO STATION NO.

RECORD OF DREDGING,
TEMPERATURE AND DENSITY.

Station No.

Date,

Time of day. : of tide,

Locality,

Exact position,

Depth,

Nature of bottom,

Dredging instrument used,

Direction of drift. : distance,

Temperature of air. therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface. temp.,

" at depth of fathoms, "

" at bottom, "

Number of salinometer.

Barometer reading.

State of sky.

Direction of wind. : force,

Rain,

Direction of surface current. : force,

" of bottom " : force,

Name of vessel.

Service to which attached,

Name and rank of commanding officer,

Name and position of observer,

NOTES RELATING TO STATION NO.

RECORD OF DREDGING,
TEMPERATURE AND DENSITY.

Station No.

Date,

Time of day. : of tide,

Locality,

Exact position,

Depth,

Nature of bottom,

Dredging instrument used,

Direction of drift. : distance,

Temperature of air. therm. No.,

" of surface water. "

" at depth of fathoms. "

" at bottom. "

Density at surface. temp.,

" at depth of fathoms. "

" at bottom. "

Number of salinometer,

Barometer reading,

State of sky,

Direction of wind. : force,

Rain,

Direction of surface current. : force,

" of bottom " : force,

Name of vessel,

Service to which attached,

Name and rank of commanding officer,

Name and position of observer,

NOTES RELATING TO STATION NO.

RECORD OF DREDGING,
TEMPERATURE AND DENSITY.

Station No.

Date,

Time of day. : of tide,

Locality,

Exact position,

Depth,

Nature of bottom,

Dredging instrument used,

Direction of drift. : distance,

Temperature of air. therm. No.,

" of surface water, ..

" at depth of fathoms, ..

" at bottom, ..

Density at surface. temp.,

" at depth of fathoms, ..

" at bottom, ..

Number of salinometer,

Barometer reading,

State of sky,

Direction of wind. : force,

Rain,

Direction of surface current. : force,

" of bottom " : force,

Name of vessel,

Service to which attached,

Name and rank of commanding officer,

Name and position of observer,

NOTES RELATING TO STATION NO.

RECORD OF DREDGING,
TEMPERATURE AND DENSITY.

Station No.

Date.

Time of day. : of tide,

Locality,

Exact position,

Depth,

Nature of bottom,

Dredging instrument used,

Direction of drift. : distance,

Temperature of air. therm. No.,

" of surface water. "

" at depth of fathoms, "

" at bottom, "

Density at surface. temp.,

" at depth of fathoms, "

" at bottom, "

Number of salinometer.

Barometer reading.

State of sky.

Direction of wind. : force,

Rain,

Direction of surface current. : force,

" of bottom " : force,

Name of vessel.

Service to which attached,

Name and rank of commanding officer,

Name and position of observer,

NOTES RELATING TO STATION NO.

RECORD OF DREDGING,
TEMPERATURE AND DENSITY.

Station No.

Date.

Time of day. : of tide,

Locality,

Exact position,

Depth,

Nature of bottom,

Dredging instrument used,

Direction of drift, ; distance,

Temperature of air, therm. No.,

" of surface water, ..

" at depth of fathoms, ..

" at bottom, ..

Density at surface, temp.,

" at depth of fathoms, ..

" at bottom, ..

Number of salinometer,

Barometer reading,

State of sky,

Direction of wind, ; force,

Rain,

Direction of surface current, ; force,

" of bottom " ; force,

Name of vessel,

Service to which attached,

Name and rank of commanding officer,

Name and position of observer,

NOTES RELATING TO STATION NO.

RECORD OF DREDGING,
TEMPERATURE AND DENSITY.

Station No.

Date.

Time of day. : of tide.

Locality,

Exact position,

Depth,

Nature of bottom.

Dredging instrument used,

Direction of drift, : distance,

Temperature of air, therm. No.,

" of surface water, ..

" at depth of fathoms, ..

" at bottom, ..

Density at surface, temp.,

" at depth of fathoms, ..

" at bottom, ..

Number of salinometer,

Barometer reading,

State of sky,

Direction of wind, : force,

Rain,

Direction of surface current, : force,

" of bottom " : force,

Name of vessel,

Service to which attached,

Name and rank of commanding officer,

Name and position of observer,

NOTES RELATING TO STATION NO.

RECORD OF DREDGING,
TEMPERATURE AND DENSITY.

Station No.

Date,

Time of day, : of tide,

Locality,

Exact position,

Depth,

Nature of bottom,

Dredging instrument used,

Direction of drift, : distance,

Temperature of air, therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, temp.,

" at depth of fathoms, "

" at bottom, "

Number of salinometer,

Barometer reading,

State of sky,

Direction of wind, : force,

Rain,

Direction of surface current, : force,

" of bottom " : force,

Name of vessel,

Service to which attached,

Name and rank of commanding officer,

Name and position of observer,

NOTES RELATING TO STATION NO. 1